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|--|-------------|-------------------------|---------------------------|------------------|
| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
| 10/516,880 | 12/03/2004 | Klaus Ingemann Pedersen | 60282.00225 | 1705 |
| 32294 7590 02/02/2007 SQUIRE, SANDERS & DEMPSEY L.L.P. 14TH FLOOR 8000 TOWERS CRESCENT TYSONS CORNER, VA 22182 | | | EXAMINER NGUYEN, SIMON | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2618 | |
| SHORTENED STATUTORY PERIOD OF RESPONSE | | MAIL DATE | DELIVERY MODE | |
| 3 MONTHS | | 02/02/2007 | PAPER | |

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/516,880

Applicant(s)

PEDERSEN ET AL.

Examiner

SIMON D. NGUYEN

Art Unit

2618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,7-12 and 17-22 is/are rejected.
- 7) ☒ Claim(s) 3-6 and 13-16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Regarding claims 5, 7, 8, 15, 17, 18, 22, the phrase "e.g." in claims 5, 7, 15, 17, 22; and "i.e." in claims 8, 18, render the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-2, 11-12, 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Agrawal et al. (6,879,576) in view of Yi et al. (2001/0012301).

Regarding claims 1, 11, 21, Agrawal discloses method and apparatus for providing a code resource in a cellular systems (fig.5), preferably a terrestrial cellular CDMA systems (abstract), wherein a base station comprises an antenna system which generates several beams (fig.1, 3A, column 7 lines 10-11), and a Spreading Factor (SF) of the root channelization code sets an upper limit on the bit rate (fig.5, column 7 line 49

to column 8 line 5) , wherein the Spreading Factor of the root (base) channelization code is selected according to the set of Spreading Factors assumed for the different beams (fig.3a, column 5 lines 17-26, 62-63, 65). However, Agrawal fails to teach the channelization code sets a maximum data rate and selecting according to the set of minimum SF.

Yi, in the same field of invention, discloses the SP of the root channelization code sets an upper limit on a minimum bit rate and selected according to the set of minimum SF (paragraphs 147, 1177, claim 15). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to have Agrawal, modified by Yi in order to improve the packet transmission.

Regarding claim 2, 12, Agrawal further discloses the channelization code is a PDSCH (column 7 line 20, column 8 line 10).

5. Claims 7-10, 17-20, 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Agrawal et al. (6,879,576) in view of Yi et al. (2001/0012301), and further in view Scherzer et al. (6,895,258).

Regarding claims 7-8, 17-18, 22, Agrawal discloses the physical DSCH used to downlink. However, the modified Agrawal fails to teach a downlink schedule transmission for parallel beams.

Scherzer discloses a downlink schedule transmission for parallel beams to subscriber stations (column 20 lines 25-33). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to have modified Agrawal,

modified by Scherzer in order to prevent the interference caused by simultaneous transmission.

Regarding claims 9, 19, Scherzer further discloses the scheduling based on QoS (abstract, column 6 line 43-64, column 18 lines 57-67, column 19 lines 44-67).

Regarding claims 10, 20, Arawal discloses the selection of SF for downlinking PDSCH (column 7 lines 20, column 8 line 10) and wherein Scherzer further discloses the selection of the SF and packet scheduling are applied to the downlink (column 17 lines 6-23, column 20 lines 25-33).

Allowable Subject Matter

6. Claims 3-6, 13-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claims 3-6, 13-16 the prior art of record fails to teach or suggest an equation to compute a minimum SF of a DSCH based on a number of transmitted beams as claims in claims 3-4.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Simon Nguyen whose telephone number is (571) 272-7894. The examiner can normally be reached on Monday-Friday from 7:00 AM to 4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward F. Urban, can be reached on (571) 272-7899.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 306-0377.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
600 Dulany, Alexandria, VA 22314

Or faxed to:

(571) 273-8300 (for formal communications intended for entry)

Hand-delivered response should be brought to Customer Service Window located at the Randolph Building, 401 Dulany, Alexandria, VA, 22314.

Simon Nguyen

January 23, 2007



SIMON NGUYEN
PRIMARY EXAMINER